



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,063	10/25/2001	Remi Gurski	000067	3596
23696	7590	11/18/2004	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			TRAN, THIEN D	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/002,063	Applicant(s) REMI GURSKI	
	Examiner Thien D Tran	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8,10-16 and 18-29 is/are rejected.
- 7) ☒ Claim(s) 4,7 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>02/21/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, 5, 10-16, 18-29 are rejected under 35 U.S.C. 102(b) as being participated by Sutton (U.S Patent No. 5,805,648).

Regarding claim 1, Sutton discloses a method for searching for pilots in a wireless communication system, comprising:

searching at first stage over a designated code space for peaks in a received signal and providing a set of detected peaks, col.5 lines 55-65;

forming a plurality of dwell windows at second – fourth stages for the detected peaks, wherein the dwell windows have sizes determined based on locations of the detected peaks in the designated code space, col.5 lines 55-65; and

searching over the dwell windows for peaks in the received signal and providing a set of one or more candidate peaks, col.5 line 60 to col.6 line 20, figure 4.

Regarding claim 18, Sutton discloses a method for searching for pilots in a CDMA communication system, comprising:

performing a plurality of sets of searches for peaks in a received signal, wherein each set of searches is performed over a respective set of search windows, col.6 lines

Art Unit: 2665

18-27, and wherein at least one set includes search windows having variable sizes selected based on locations of expected peaks in the received signal, col.5 lines 60-65.

Regarding claims 22, 26 Sutton discloses demodulator in a wireless communication system, comprising:

a searcher operative to search over a designated code space for peaks in a received signal and to provide a set of detected peaks, col.5 lines 5-20; and

a controller operative to form a plurality of dwell windows for the detected peaks, wherein the dwell windows have sizes determined based on locations of the detected peaks in the designated code space, and wherein the searcher is further operative to search over the dwell windows for peaks in the received signal and to provide a set of one or more candidate peaks, figure 4.

Regarding claims 2, 25, 29 Sutton discloses the designated code space comprises phases for all or a portion of a pseudo-random noise (PN) sequence used to generate the pilots, col.3 lines 37-45.

Regarding claims 3, 21, 24, 28 Sutton discloses the forming includes placing an individual search window on each detected peak, and search number of time with different window sizes, in case of big size window comprising small size windows (combining overlapping individual search windows), col.5 lines 15-25.

Regarding claim 5, Sutton discloses detecting energy level of detected peaks from window to window (sorting the detected peaks based on their locations in the designated code space), col.5 line 30 to col.6 lines 25.

Regarding claim 10, Sutton discloses that the dwell windows are non-overlapping, col.5 lines 7-20.

Regarding claim 11, Sutton discloses that each individual search window has a particular size, col.5 lines 15-20.

Regarding claim 12, Sutton discloses that the size of each individual search window is 5 PN chips or less, col.4 lines 45-55.

Regarding claim 13, Sutton discloses that the individual search window is centered at each detected peak, figure 4.

Regarding claim 14, Sutton discloses that the dwell windows are formed such that each detected peak is included in only one dwell window, figure 4.

Regarding claim 15, Sutton discloses that the communication system is a CDMA system, col.2 lines 60-67.

Regarding claim 16, Sutton discloses the CDMA system conforms to IS-95 or cdma2000 standard, col.2 lines 63-67.

Regarding claim 19, Sutton discloses that variable number of peaks is returned for the variable-size search windows, col.5 lines 40-65.

Regarding claim 20, Sutton discloses that a first set of search windows includes equal-size, non-overlapping windows and covers a designated code space, col.6 lines 47-50.

Regarding claims 23, 27 Sutton discloses one or more finger processors operative to process and acquire the set of one or more candidate peaks, figure 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton (U.S Patent No. 5,805,648).

Regarding claims 6, 8 Sutton does not disclose limiting the number of overlapping individual search. However, it would have been obvious to one having ordinary skill in the art to have the feature of limiting the number of overlapping individual search so that the system can avoid the waste of resources.

Allowable Subject Matter

5. Claim 17 is allowed.

6. Claims 4, 7, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (571) 272-3156. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

Art Unit: 2665

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

Thien Tran



STEVEN NGUYEN
PRIMARY EXAMINER